

## Den økonomiske spesialskruen for vindusmontering



### BYGGEMATERIALER

- Betong
- Vertikalt perforert tegl
- Hulblokk av lettbetong
- Kalksand-hullstein
- Kalksand-helstein
- Helstein i lettbetong
- Massiv teglstein
- Siporex, Ytong

### GODKJENNINGER



### ADVANTAGES

- Screw installation without plug for economical processing.
- The small drill bit diameter of 6 mm allows for efficient series installation.
- The continuous thread ensures a stress-free fixing of the frame in the substrate.
- The high-low-thread at the screw tip as well as several cutting notches reduce the amount of force required for screwing in the screws. The installation process can be completed without excessive effort.
- With two head types applicable for all common frame materials.
- According to the ift Rosenheim suitable for the fixation of a plastic window in brick masonry.

### APPLIKASJONER

- Vindusrammer av tre, plast og aluminium
- Dørkarm
- Planker

### FUNCTIONING

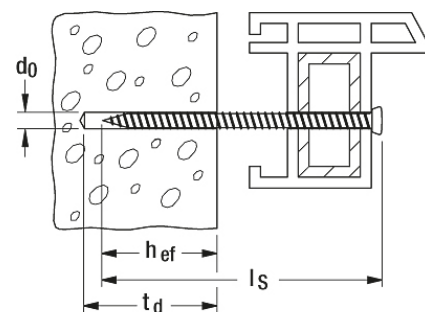
- Note the drill hole and screw-in depths for the different building materials listed in the table.
- Cylinder head screws are recommended for recessed installation in wooden profiles.
- Flat head screws are recommended for installation in plastic and aluminium profiles.



## TEKNISK DATA



Karmskrue FFS



Anchorage depth  $h_{ef}$   
 $h_{ef} \geq 30$  mm in concrete  
 $h_{ef} \geq 40$  mm in solid brick  
 $h_{ef} \geq 60$  mm in perforated brick /  
aerated concrete

$t_d$  : drill hole depth  $\geq h_{ef} + 10$  mm

| Produktnavn   | Art nr. | Nominell diameter<br>boremaskin<br>$d_0$<br>[mm] | Skruelengde<br>$l_s$<br>[mm] | Drivenhet | Skruehode<br>[Ø mm] |
|---------------|---------|--------------------------------------------------|------------------------------|-----------|---------------------|
| FFS 7,5 x 42  | 062379  | 6                                                | 42                           | T30       | 11,5                |
| FFS 7,5 x 52  | 062395  | 6                                                | 52                           | T30       | 11,5                |
| FFS 7,5 x 62  | 062396  | 6                                                | 62                           | T30       | 11,5                |
| FFS 7,5 x 72  | 061550  | 6                                                | 72                           | T30       | 11,5                |
| FFS 7,5 x 82  | 068955  | 6                                                | 82                           | T30       | 11,5                |
| FFS 7,5 x 92  | 061551  | 6                                                | 92                           | T30       | 11,5                |
| FFS 7,5 x 102 | 068956  | 6                                                | 102                          | T30       | 11,5                |
| FFS 7,5 x 112 | 061552  | 6                                                | 112                          | T30       | 11,5                |
| FFS 7,5 x 122 | 068957  | 6                                                | 122                          | T30       | 11,5                |
| FFS 7,5 x 132 | 061553  | 6                                                | 132                          | T30       | 11,5                |
| FFS 7,5 x 152 | 061554  | 6                                                | 152                          | T30       | 11,5                |
| FFS 7,5 x 182 | 061555  | 6                                                | 182                          | T30       | 11,5                |
| FFS 7,5 x 202 | 068958  | 6                                                | 202                          | T30       | 11,5                |
| FFS 7,5 x 212 | 061556  | 6                                                | 212                          | T30       | 11,5                |

## LOADS

### Window frame screw FFSZ and FFS

Highest recommended loads<sup>1)</sup> for a single screw.

| Type                                                  | FFS 7,5 / FFSZ 7,5               |                                |                       |                                  |                                |                       |                                  |                                |                |
|-------------------------------------------------------|----------------------------------|--------------------------------|-----------------------|----------------------------------|--------------------------------|-----------------------|----------------------------------|--------------------------------|----------------|
| Screw diameter [mm]                                   | 7,5                              |                                |                       |                                  |                                |                       |                                  |                                |                |
| Anchoring depth $h_{ef} \geq$ [mm]                    | 30                               |                                |                       | 40                               |                                |                       | 60                               |                                |                |
|                                                       | recommen-<br>ded tensile<br>load | recommen-<br>ded shear<br>load | min. edge<br>distance | recommen-<br>ded tensile<br>load | recommen-<br>ded shear<br>load | min. edge<br>distance | recommen-<br>ded tensile<br>load | recommen-<br>ded shear<br>load | min. dist      |
|                                                       | $N_{rec}^{4)}$                   | $V_{rec}^{4)}$                 | $c_{min}^{5)}$        | $N_{rec}^{4)}$                   | $V_{rec}^{4)}$                 | $c_{rec}^{5)}$        | $N_{rec}^{4)}$                   | $V_{rec}^{4)}$                 | $c_{min}^{5)}$ |
|                                                       | [kN]                             | [kN]                           | [mm]                  | [kN]                             | [kN]                           | [mm]                  | [kN]                             | [kN]                           | [mm]           |
| Concrete $\geq C20/25$ bzw. $\geq B25$                | 1,00                             | 0,70                           | 30                    | -                                | -                              | -                     | -                                | -                              | -              |
| Solid sand-lime brick $\geq KS 12$                    | -                                | -                              | -                     | 1,00                             | 0,60                           | 40                    | -                                | -                              | -              |
| Solid brick $\geq Mz 12$                              | -                                | -                              | -                     | 0,40 <sup>2)</sup>               | 0,30 <sup>2)</sup>             | 40                    | 0,80                             | 0,70                           | 40             |
| Vertical perforated brick $\geq HLz 12$ <sup>2)</sup> | -                                | -                              | -                     | -                                | -                              | -                     | 0,25                             | 0,40                           | 40             |
| Aerated concrete block $\geq PB2, PP2$ <sup>3)</sup>  | -                                | -                              | -                     | -                                | -                              | -                     | 0,10                             | 0,10                           | 40             |
| Aerated concrete block $\geq PB4, PP4$ <sup>3)</sup>  | -                                | -                              | -                     | -                                | -                              | -                     | 0,25                             | 0,25                           | 40             |

<sup>1)</sup> A single screw is, e.g. a screw with an axial spacing  $s \geq 3 \times h_{ef}$  and an edge distance  $c \geq 1,5 \times h_{ef}$ . The required safety factors are considered with a displacement of 3 mm in case of shear loads.

<sup>2)</sup> Drill method rotary drilling.

<sup>3)</sup> Without pre-drilling.

<sup>4)</sup> Without influence from edge distances and spacings.

<sup>5)</sup> Minimal possible edge distance while reducing the recommended loads.

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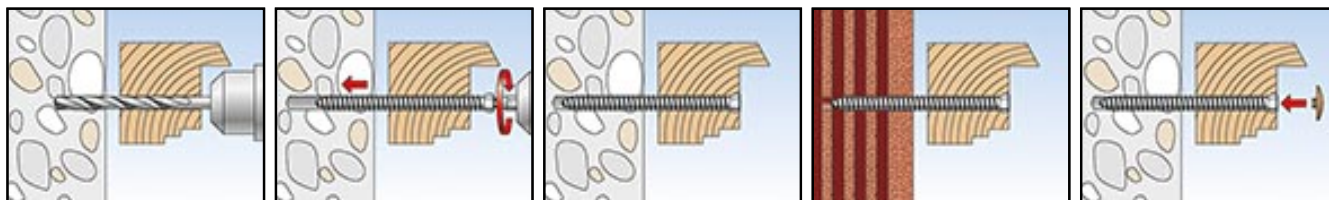
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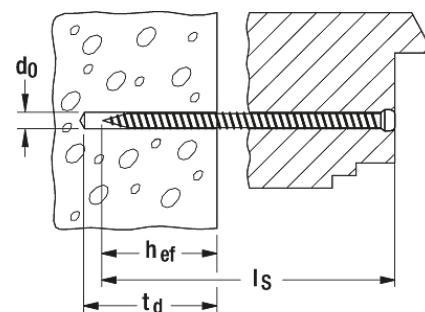
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|--------------------|---------|--------------------------------------------------|------------------------------|-----------|---------------------|
| FFSZ 7,5 x 52 T30  | 515731  | 6                                                | 52                           | T30       | 8,5                 |
| FFSZ 7,5 x 62 T30  | 515732  | 6                                                | 62                           | T30       | 8,5                 |
| FFSZ 7,5 x 72 T30  | 515734  | 6                                                | 72                           | T30       | 8,5                 |
| FFSZ 7,5 x 82 T30  | 515737  | 6                                                | 82                           | T30       | 8,5                 |
| FFSZ 7,5 x 92 T30  | 515738  | 6                                                | 92                           | T30       | 8,5                 |
| FFSZ 7,5 x 102 T30 | 515739  | 6                                                | 102                          | T30       | 8,5                 |
| FFSZ 7,5 x 112 T30 | 515740  | 6                                                | 112                          | T30       | 8,5                 |
| FFSZ 7,5 x 122 T30 | 515741  | 6                                                | 122                          | T30       | 8,5                 |
| FFSZ 7,5 x 132 T30 | 515742  | 6                                                | 132                          | T30       | 8,5                 |
| FFSZ 7,5 x 152 T30 | 515743  | 6                                                | 152                          | T30       | 8,5                 |
| FFSZ 7,5 x 182 T30 | 515744  | 6                                                | 182                          | T30       | 8,5                 |
| FFSZ 7,5 x 202 T30 | 515745  | 6                                                | 202                          | T30       | 8,5                 |
| FFSZ 7,5 x 212 T30 | 515746  | 6                                                | 212                          | T30       | 8,5                 |

## LOADS

### Window frame screw FFSZ and FFS

Highest recommended loads<sup>1)</sup> for a single screw.

| Type                                                  | FFS 7,5 / FFSZ 7,5               |                                |                       |                                  |                                |                       |                                  |                                |                |
|-------------------------------------------------------|----------------------------------|--------------------------------|-----------------------|----------------------------------|--------------------------------|-----------------------|----------------------------------|--------------------------------|----------------|
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|                                                       | recommen-<br>ded tensile<br>load | recommen-<br>ded shear<br>load | min. edge<br>distance | recommen-<br>ded tensile<br>load | recommen-<br>ded shear<br>load | min. edge<br>distance | recommen-<br>ded tensile<br>load | recommen-<br>ded shear<br>load | min. dist      |
|                                                       | $N_{rec}^{4)}$                   | $V_{rec}^{4)}$                 | $c_{min}^{5)}$        | $N_{rec}^{4)}$                   | $V_{rec}^{4)}$                 | $c_{rec}^{5)}$        | $N_{rec}^{4)}$                   | $V_{rec}^{4)}$                 | $c_{min}^{5)}$ |
|                                                       | [kN]                             | [kN]                           | [mm]                  | [kN]                             | [kN]                           | [mm]                  | [kN]                             | [kN]                           | [mm]           |
| Concrete $\geq C20/25$ bzw. $\geq B25$                | 1,00                             | 0,70                           | 30                    | -                                | -                              | -                     | -                                | -                              | -              |
| Solid sand-lime brick $\geq KS 12$                    | -                                | -                              | -                     | 1,00                             | 0,60                           | 40                    | -                                | -                              | -              |
| Solid brick $\geq Mz 12$                              | -                                | -                              | -                     | 0,40 <sup>2)</sup>               | 0,30 <sup>2)</sup>             | 40                    | 0,80                             | 0,70                           | 40             |
| Vertical perforated brick $\geq HLz 12$ <sup>2)</sup> | -                                | -                              | -                     | -                                | -                              | -                     | 0,25                             | 0,40                           | 40             |
| Aerated concrete block $\geq PB2, PP2$ <sup>3)</sup>  | -                                | -                              | -                     | -                                | -                              | -                     | 0,10                             | 0,10                           | 40             |
| Aerated concrete block $\geq PB4, PP4$ <sup>3)</sup>  | -                                | -                              | -                     | -                                | -                              | -                     | 0,25                             | 0,25                           | 40             |

<sup>1)</sup> A single screw is, e.g. a screw with an axial spacing  $s \geq 3 \times h_{ef}$  and an edge distance  $c \geq 1,5 \times h_{ef}$ . The required safety factors are considered with a displacement of 3 mm in case of shear loads.

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